

### **Remarks**

This Amendment is in response to the Office Action dated October 31, 2005. Claims 1-41, 104-144 are pending. Claims 42-103 are withdrawn. Claims 24, 25, 28-35, 126-127, and 130-137 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-23, 26, 27, 36-41, 104-125, 128, 129, and 138-144 are rejected. Claims 24, 25, 28-32, 126, 127, 130-134 are amended to rewrite them in independent form. Claims 33-35 are dependent on claim 32 as original. Claims 135-137 are dependent on Claim 134 as original. Claim 1 and 104 are amended. Accordingly, claims 1-41 and 104-144 remain pending in the present application.

### Claims Rejections-35 USC 102(b)

Claims 1-23, 26, 27, 36-41, 104-125, 128, 129, and 138-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Agahi et. al., U.S.P. No. 5,559,912. Examiner stated:

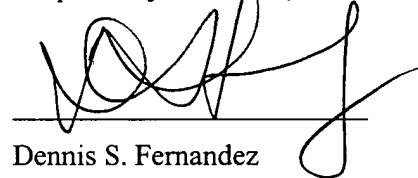
Agahi et. al. 912' teaches (Fig.1-5) an integrated photonic-electronic circuit device or wavelength processor comprising: an electronic circuit portion including plural light detectors/wavelength filters (Note that the detectors can be used for wavelength filtering, multiplexing (add/drop), broadband or narrowband coupling and can be either used with analog, RF or digital signals) 400 comprising at least one group IV semiconductor layer (silicon, germanium) and a photonic interface integrated optical waveguide coupler 106, 104 (Note that at least one waveguide can be optical fiber 300, 302) wherein the photonic interface can include SIO<sub>2</sub> (silica) which can be at least partially transparent to light and have a bandgap energy less than that of silicon wherein all the components are formed on a silicon or SOI substrate 100 and form an integrated "chip" device.

Applicants respectfully disagree as to the claim 1 and 104 as amended. The present invention as recited in amended independent claim 1 and 104, provides an integrated photonic-electronic circuit comprising a transistor logic module in an electronic circuit portion (see Fig. 1) and a photonic interface integrated on a single chip. In contrast, what Agahi et. al. 912' presented is a planar semiconductor waveguide on a SOI substrate that the electronic circuit portion is limited to a light detector using p-n junction that is set to analyze the photo-generated carrier for wavelength selective detection. For this reason, Agahi et. al. 912' does not teach or suggest an integrated photonic-electronic circuit in a single chip as recited in amended independent claim 1 and 104. Applicant further submits that dependent claims 2-23, 26, 27, 36-41, 105-125, 128, 129, and 138-144 are allowable because they depend upon the allowable base claim 1 and 104.

### Conclusion

Applicants respectfully submit that claims 1-41 and 104-144 are in condition for allowance, and thus, reconsideration of the rejections is requested. Claims 42-103 are still withdrawn from consideration as elected in last Office Action Response filed on October 3, 2005.

Respectfully submitted,



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